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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/798,855	03/12/2004	Hisashi Amaya	12054-0024	6672

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EXAMINER	
ROE, JESSEE RANDALL	
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/798,855	AMAYA ET AL.	
	Examiner	Art Unit	
	Jessee Roe	1793	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *13 March 2009*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-8 and 13-20* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-8 and 13-20* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on March 13, 2009 has been entered.

Status of the Claims

Claims 1-8 and 13-20 are pending.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1 and 3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Miyata et al. (US 5,858,128).

In regards to claims 1 and 3, Miyata et al. ('128) discloses a martensitic stainless steel alloy pipe (plastically processed that would have utility in applications such as

petroleum and natural gas pipelines having a composition relative to that of the instant invention as shown in the table below (abstract and col. 1, lines 8-11).

Element	From Instant Claims (weight percent)	Miyata et al. ('128) (weight percent)	Overlap (weight percent)
C	0.02 – 0.10	0 – about 0.03	0.02 – about 0.03
Si	0.05 – 1.0	0 – about 0.50	0.05 – about 0.50
Mn	0.05 – 0.95	about 0.5 – 3.0	about 0.5 – 0.95
P	0 – 0.03	0 – about 0.03	0 – 0.03
S	0 – 0.01	0 – about 0.01	0 – 0.01
Cr	9 – 15	about 10 – 14	about 10 – 14
Ni	1.0 – 4.5	about 0.2 – 2.0	1.0 – 2.0
Al	0 – 0.05	0	0
N	0 – 0.1	0 – about 0.03	0 – about 0.03
Cu	0.05 – 5	about 0.2 – 1.0	about 0.2 – 1.0
Fe	balance	balance	balance

The Examiner notes that the disclosed amounts of carbon, silicon, manganese, phosphorus, sulfur, chromium, nickel, aluminum, nitrogen, and copper of the martensitic stainless steel alloy disclosed by Miyata et al. ('128) overlaps the composition of the instant invention, which is prima facie evidence of obviousness. MPEP 2144.05 I. It would have been obvious to one of ordinary skill in the art at the time the invention was made to select the claimed composition from the composition disclosed by Miyata et al. ('128) because Miyata et al. ('128) discloses the same utility (martensitic stainless steel alloy) throughout the disclosed ranges.

With respect to the hardness range of 30 – 45 HRC and "the amount of carbides in grain boundaries of the prior austenite is not more than 0.5 volume %." in claims 1 and 3, the Examiner notes that Miyata et al. ('128) discloses substantially the same composition in addition to forming into a pipe (plastically processed history) (abstract

and col. 2, lines 29-38). Therefore, these properties would be expected. MPEP 2112.01 I.

With respect to the formula $0.2 \leq Mo + Cu/4 \leq 5$ of claims 1 and 3, it is well settled that there is no invention in the discovery of a general formula if it covers a composition described in the prior art, In re Cooper and Foley 1943 C.D. 357, 553 O.G. 177; 57 USPQ 117, Saklatwalla v. Marburg, 620 O.G. 685, 1949 C.D. 77, and In re Pilling, 403 O.G. 513, 44 F(2) 878, 1931 C.D. 75. In absence of evidence to the contrary, the selection of the proportions of elements would appear to require no more than routine investigation by those of ordinary skill in the art. In re Austin, et al., 149 USPQ 685, 688. It would have been obvious to one of ordinary skill in the art to select the desired amounts of copper and molybdenum from the ranges disclosed by Miyata et al. (‘128) such that the formula would be satisfied because Miyata et al. (‘128) discloses the same utility throughout the disclosed ranges.

Still regarding claim 3, Miyata et al. ('128) discloses up to 0.3 weight percent titanium, vanadium, and niobium, which overlaps the ranges of 0.005 to 0.5 weight percent of at least one of titanium, vanadium, and niobium as instantly claimed (col. 4, lines 1-17).

Claims 1-8 and 13-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hara et al. (US 5,716,465).

In regards to claims 1-8 and 13-20, Hara et al. ('465) discloses a martensitic stainless steel that would have utility in oil and gas wells having a composition relative

to that of the instant invention as shown in the table below (abstract and col. 1, lines 12-48).

Element	From Instant Claims (weight percent)	Hara et al. ('465) (weight percent)	Overlap (weight percent)
C	0.02 – 0.10	0.005 – 0.035	0.02 – 0.035
Si	0.05 – 1.0	0 – 0.50	0.05 – 0.50
Mn	0.05 – 0.95	0.1 – 1.0	0.1 – 0.95
P	0 – 0.03	0 – 0.03	0 – 0.03
S	0 – 0.01	0 – 0.005	0 – 0.005
Cr	9 – 15	8 – 13	9 – 13
Ni	1.0 – 4.5	1.5 – 5.0	1.5 – 4.5
Al	0 – 0.05	0 – 0.06	0 – 0.05
N	0 – 0.1	0 – 0.01	0 – 0.01
Cu	0.05 – 5	1.0 – 4.0	1.0 – 4.0
Mo	0.05 – 5	1.0 – 3.0	1.0 – 3.0
Fe	balance	balance	balance

The Examiner notes that the disclosed amounts of carbon, silicon, manganese, phosphorus, sulfur, chromium, nickel, aluminum, nitrogen, copper and molybdenum of the martensitic stainless steel alloy disclosed by Hara et al. ('465) overlaps the composition of the instant invention, which is prima facie evidence of obviousness. MPEP 2144.05 I. It would have been obvious to one of ordinary skill in the art at the time the invention was made to select the claimed composition from the composition disclosed by Hara et al. ('465) because Hara et al. ('465) discloses the same utility (martensitic stainless steel alloy) throughout the disclosed ranges.

With respect to the hardness range of 30 – 45 HRC and “the amount of carbides in grain boundaries of the prior austenite is not more than 0.5 volume %." in claims 1-8 and 13-20, the Examiner notes that Hara et al. ('465) discloses substantially the same

composition in addition to hot rolling and cold rolling to form a pipe (plastically processed history) (abstract and col. 2, lines 12 - 23). Therefore, these properties would be expected. MPEP 2112.01 I.

With respect to the formulas $0.2\% \leq Mo + Cu/4 \leq 5\%$ and $0.55\% \leq Mo + Cu/4 \leq 5\%$ of claims 1-8 and 13-20, it is well settled that there is no invention in the discovery of a general formula if it covers a composition described in the prior art, In re Cooper and Foley 1943 C.D. 357, 553 O.G. 177; 57 USPQ 117, Saklatwalla v. Marburg, 620 O.G. 685, 1949 C.D. 77, and In re Pilling, 403 O.G. 513, 44 F(2) 878, 1931 C.D. 75. In absence of evidence to the contrary, the selection of the proportions of elements would appear to require no more than routine investigation by those of ordinary skill in the art. In re Austin, et al., 149 USPQ 685, 688. It would have been obvious to one of ordinary skill in the art to select the desired amounts of copper and molybdenum from the ranges disclosed by Hara et al. ('465) such that the formula would be satisfied because Hara et al. ('465) discloses the same utility throughout the disclosed ranges.

Still regarding claims 3-4, 7-8, 15-16 and 19-20, Hara et al. (‘465) discloses adding 0.005 to 0.1 weight percent titanium in order to inhibit grain growth and the deterioration of toughness, which overlaps the range of 0.005 to 0.5 weight percent titanium as claimed in the instant invention (abstract and col. 5, lines 24-35).

Still regarding claims 5-6, 7-8, 17-18 and 19-20, Hara et al. ('465) discloses adding 0.001 to 0.02 weight percent calcium to bring inclusions to a spherical form, which overlaps the range of 0.0003 to 0.005 weight percent calcium as claimed in the instant invention (abstract and col. 5, lines 37-43).

With respect to the recitation “the martensitic stainless steel having a structure resulting from one of quenching, air cooling, quenching followed by a 400°C or lower tempering treatment, or air cooling followed by a 400°C or lower tempering treatment” in claims 13-20, Hara et al. (‘465) discloses air cooling (Table 2).

With respect to the recitation “and the amounts of Cu and Mo effective to form a sulfide layer on a formed chromium oxide layer” in claims 13-20, the Examiner asserts that Hara et al. (‘465) discloses amounts of copper and molybdenum effective to form this sulfide layer because Hara et al. (‘465) discloses the same or a substantially similar composition. MPEP 2112.01 I.

With respect to the recitation “the sulfide layer formed as a result of the martensitic stainless steel being subjected to a sulfur-containing environment" in claims 13-20, Hara et al. (‘465) discloses the same or a substantially similar composition and subjecting the composition to a sulfide-containing atmosphere (col. 6, lines 39-50). Therefore, formation of the sulfide layer would be expected. MPEP 2112.01 I.

Claims 1-8 and 13-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Woods (US 6,716,291) in view of the ASM Metals Handbook Volume 1 (pg. 145, col. 3 and pg. 146, col. 2).

In regards to claims 1-8 and 13-20, Woods (‘291) discloses a martensitic stainless steel composition relative to the instant invention as shown in the table on the following page (abstract).

Element	From Instant Claims (weight percent)	Woods ('291) (weight percent)	Overlap (weight percent)
C	0.02 – 0.10	about 0.10 – 2	about 0.10
Si	0.05 – 1.0	0 – about 2	0.05 – 1.0
Mn	0.05 – 0.95	about 0.1 – 2.0	about 0.1 – 0.95
P	0 – 0.03	0 – about 1	0 – 0.03
S	0 – 0.01	0 – about 1	0 – 0.01
Cr	9 – 15	about 5 – 15	9 – 15
Ni	1.0 – 4.5	about 0.15 - 15	1.0 – 4.5
Al	0 – 0.05	0	0
N	0 – 0.1	0	0
Cu	0.05 – 5	-	-
Mo	0.05 – 5	0.1 – 10	0.10 – 5
Fe	balance	balance	balance

The Examiner notes that the disclosed amounts of carbon, silicon, manganese, phosphorus, sulfur, chromium, nickel, aluminum, nitrogen and molybdenum of the martensitic stainless steel alloy disclosed by Woods ('291) overlaps the composition of the instant invention, which is prima facie evidence of obviousness. MPEP 2144.05 I. It would have been obvious to one of ordinary skill in the art at the time the invention was made to select the claimed amounts of carbon, silicon, manganese, phosphorus, sulfur, chromium, nickel, aluminum, nitrogen and molybdenum from the composition disclosed by Woods ('291) because Woods ('291) discloses the same utility (martensitic stainless steel alloy) throughout the disclosed ranges.

Woods ('291) discloses a martensitic stainless steel as discussed above, but Woods ('291) does not specify 0.05 to 5 weight percent copper (pg. 145, col. 3).

The ASM Metals Handbook Volume 1 discloses that using copper in excess of 0.20 weight percent is beneficial to atmospheric corrosion resistance (pg. 145, col. 3).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to add 0.20 weight percent copper, as disclosed by the

ASM Metals Handbook Volume 1, to the steel composition, as disclosed by Woods ('291), in order to improve atmospheric corrosion resistance, as disclosed by the ASM Metals Handbook Volume 1 (pg. 145, col. 3).

Still regarding claims 3-4, 7-8, 15-16 and 19-20, Woods ('291) discloses a martensitic stainless steel as discussed above, but Woods ('291) does not specify "at least one of the elements of Ti: 0.005-0.5%, V: 0.005-0.5% and Nb: 0.005-0.5%".

The ASM Metals Handbook Volume 1 discloses that the addition of 0.02 weight percent niobium would increase yield strength by about 70 to 100 MPa (pg. 146, col. 2).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to add 0.02 weight percent niobium, as disclosed by the ASM Metals Handbook Volume 1, to the steel composition, as disclosed by Woods ('291), in order to increase yield strength by about 70 to 100 MPa, as disclosed by the ASM Metals Handbook Volume 1 (pg. 146, col. 2).

Still regarding claims 5-6, 7-8, 17-18 and 19-20, Woods discloses not more than about 5 weight percent, which overlaps the range of 0.0002 to 0.005 weight percent boron as claimed (col. 2, lines 25-30).

With respect to the hardness range of 30 – 45 HRC and "the amount of carbides in grain boundaries of the prior austenite is not more than 0.5 volume %." in claims 1 and 3, the Examiner notes that Woods ('291) discloses a hardness in the range of 40-50 HRC; cooling rapidly in air, oil, or water; and tempering at a temperature in the range of 300°F - 1200°F (149°C - 650°C) (col. 1, lines 38-57). Therefore, the amount of carbides in grain boundaries of the prior austenite is not more than 0.5 volume % would be

expected. MPEP 2112.01 I. Additionally, Woods ('291) discloses forming dies, shafts, drill heads, and other related items (plastically process history) (col. 4, lines 57-65).

With respect to the formulas 0.2% $\leq$ Mo + Cu/4 $\leq$ 5% and 0.55% $\leq$ Mo + Cu/4 $\leq$ 5% of claims 1-8 and 13-20, it is well settled that there is no invention in the discovery of a general formula if it covers a composition described in the prior art, In re Cooper and Foley 1943 C.D. 357, 553 O.G. 177; 57 USPQ 117, Saklatwalla v. Marburg, 620 O.G. 685, 1949 C.D. 77, and In re Pilling, 403 O.G. 513, 44 F(2) 878, 1931 C.D. 75. In absence of evidence to the contrary, the selection of the proportions of elements would appear to require no more than routine investigation by those of ordinary skill in the art. In re Austin, et al., 149 USPQ 685, 688. It would have been obvious to one of ordinary skill in the art to select the desired amounts of copper and molybdenum from the ranges disclosed by Woods ('291) in view of the ASM Metals Handbook Volume 1 such that the formula would be satisfied because Woods ('291) in view of the ASM Metals Handbook Volume 1 discloses the same utility throughout the disclosed ranges.

With respect to the recitation "and the amounts of Cu and Mo effective to form a sulfide layer on a formed chromium oxide layer, the sulfide layer formed as a result of the martensitic stainless steel being subjected to a sulfur-containing environment" in claims 13-20, Woods ('291) in view of the ASM Metals Handbook Volume 1 discloses the same or a substantially similar composition. Therefore, formation of the sulfide layer would be expected. MPEP 2112.01 I.

Response to the Declaration Under 37 CFR §1.132

The Declaration under 37 CFR 1.132 filed 13 March 2009 is insufficient to overcome the rejection of claims 1 and 3 under 35 U.S.C. 103(a) as being unpatentable over Miyata et al. ('128) and claims 1-8 and 13-20 under 35 U.S.C. 103(a) as being unpatentable over Hara et al. ('465) as set forth in the last Office action because:

The Applicant primarily argues that Figure 2.13 of Exhibit A, a heat treatment, i.e., tempering in the range of 500-700°C as disclosed in Hara et al. ('465) and Miyata ('128) should incur precipitation of carbides and this contrasts with a heat treatment in a temperature range of 400°C or less. The Applicant further argues that a product subjected to a heat treatment in a temperature range of 400°C or less is more similar to a steel product in an as-quenched condition than one that has carbide precipitation as a result of tempering in the range of 500-700°C.

In response, the Examiner notes that although from Figure 2.13 of Exhibit A, it appears that one skilled in the art would expect some carbide precipitation from tempering in the range of 500-700°C, as disclosed in Hara et al. ('465), how much carbide precipitation is expected is still in question. The claims, as written, allow for up to 0.5 volume percent of carbides in the grain boundaries of the prior austenite and do not specify what volume percent of carbides are present in the entire structure. Thus, Applicant's Declaration is not deemed persuasive because although one skilled in the art would expect some carbide precipitation by observing Figure 2.13 of Exhibit A does not necessarily mean that this carbide precipitation would exceed 0.5 volume percent in the grain boundaries of the prior austenite. Miyata et al. ('128) is different relative to the

instant invention than Hara et al. ('465) is relative to the instant invention because Miyata et al. ('128) teaches tempering at a temperature substantially equal to the Ac_1 point or lower (col. 5, lines 35-38). Therefore, the temperature of the tempering step of Miyata et al. ('128) overlaps the tempering step of the instant invention.

Response to Arguments

Applicant's arguments filed 1 December 2008 have been fully considered but they are not persuasive.

First, the Applicant primarily argues that Miyata et al. ('128) fails to disclose a heat treatment similar to Applicant's which is characterized by an as-quench condition from a temperature of Ac_3 point or more, or further by a low temperature tempering at 400°C or less. The Applicant further argues that in the embodiments of Tables 1 and 2 of Miyata et al. ('128), all of the disclosed examples indicate a content of manganese more than 1.47 weight percent and in the case of the embodiments of Table 3, all examples show a manganese content of 1.51 weight percent or more and thus these examples fall outside the claimed upper limit of 0.95 weight percent manganese as in claims 1 and 3.

In response, Miyata et al. ('128) teaches tempering at a temperature substantially equal to the Ac_1 point or lower (col. 5, lines 35-38). Therefore, the temperature of the tempering step of Miyata et al. ('128) overlaps the tempering step of the instant invention. Additionally, the Examiner notes that disclosed examples and preferred embodiments do not constitute a teaching away from a broader disclosure or non-

preferred embodiments, which teaches manganese content of 0.5 to 3.0 weight percent (abstract). MPEP 2123 II.

Second, the Applicant primarily argues that all of the examples in Table 2 of Miyata et al. ('128) have a C content of 0.018% or less and this is outside the claimed range of 0.02 to 0.10% C. The Applicant further argues that since Miyata et al. ('128) does not disclose a composition that satisfies the equation, $0.2\% \leq Mo + Cu/4 \leq 5\%$, the Examiner must treat the equation from an obviousness standpoint and the problem with this approach is that Miyata et al. ('128) does not disclose the claimed composition so that it cannot be assumed that the composition of Miyata et al. ('128) inherently satisfies the formula. Finally, the Applicant argues that the Examiner is improperly saying that the existence of a mere overlap in composition means that any formula associated with the composition overlapped by the prior art cannot carry any patentable weight and if the Examiner continues to take this position, the Examiner is called upon to support such a stance with reference to established case law.

In response, the Examiner first notes that disclosed examples and preferred embodiments do not constitute a teaching away from a broader disclosure or non-preferred embodiments, which teaches carbon content of about 0.03 weight percent or less (abstract). MPEP 2123 II. Although Miyata et al. ('128) does not disclose the claimed equation, Miyata et al. ('128) does disclose an overlapping content of copper. The normal desire of scientists or artisans to improve upon what is already generally known provides the motivation to determine where in a disclosed set of percentage ranges is the optimum combination of percentages. MPEP 2144.05 II.

Third, the Applicant primarily argues that in Miyata et al. (‘128) Table 3 shows an achievable tensile strength (TS) of 732 MPa or less. Converting this value to HRC hardness using the attached Exhibit results in a hardness of 18.2, which is well below the limit of 30 HRC and this is further substantiation that the hardness characteristic of claims 1 and 3 is missing from Miyata et al. ('128) and the rejection is in error.

In response, Miyata et al. (‘128) does not label or disclose Table 3 as being the highest achievable tensile strength (hardness values) and this is an improper extrapolation of the data presented in Table 3.

Fourth, the Applicant primarily argues that it is clear that Hara et al. (‘465) sees it as essential to perform the final tempering at a temperature range in the range of 500°C to the Ac_1 so that based on this step, a preceding heating in a dual phase region and preceding tempering are contemplated and therefore it is evident that Hara et al. ('465) cannot be said to meet the limitation regarding the carbide amount and hardness since the processing of Hara et al. ('465) is not the same as that employed by the invention to attain this objective.

In response, although from Figure 2.13 of Exhibit A, it appears that one skilled in the art would expect some carbide precipitation from tempering in the range of 500-700°C, as disclosed in Hara et al. (‘465), how much carbide precipitation is expected is still in question. The claims, as written, allow for up to 0.5 volume percent of carbides in the grain boundaries of the prior austenite and do not specify what volume percent of carbides are present in the entire structure. Applicant has failed to show how much

carbide precipitation is present in the grain boundaries of the prior austenite after tempering at 500°C.

Fifth, the Applicant primarily argues that in Table 2 of Hara et al. ('465) an achievable tensile strength (TS) of 824 MPa is shown and converting this value to HRC hardness using the attached Exhibit results in a hardness of 23.5, which is well below the lower limit of 30 HRC and this is further substantiation that the hardness characteristic of claims 1-8 and 13-20 is missing from Hara et al. ('465) and the rejection is in error.

In response, Hara et al. ('465) does not label or disclose Table 2 as being the highest achievable tensile strength (hardness values) and this is an improper extrapolation of the data presented in Table 2.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jessee Roe whose telephone number is (571)272-5938. The examiner can normally be reached on Monday-Thursday and alternate Fridays 7:00 AM - 4:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Roy V. King can be reached on (571) 272-1244. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Roy King/
Supervisory Patent Examiner, Art Unit 1793

JR